CLAIMS

I now claim:

1. A curable composition comprising:

(a) an alkenyl terminated linear diorganopolysiloxane gum;

(b) an alkenyl containing diorganopolysiloxane gum;

(c) a precipitated silica reinforcing filler with surface area of from about 90 to 300 m^2/g;

(d) a hydroxy terminated polysiloxane fluid;

(e) an organohydrogenpolysiloxane;

(f) an effective amount of a low compression set additive; and

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(g) an effective amount of an addition-cure catalyst.

2. The composition of claim 1, wherein the composition comprises:

(a) from 60 to 98 parts by weight of the alkenyl terminated linear diorganopolysiloxane gum;

(b) from 2 to 40 parts by weight of the alkenyl containing diorganopolysiloxane gum;

(c) from 10 to 200 parts by weight of the non-fumed silica;

(d) from 0.1 to 10.0 parts by weight of the hydroxy terminated polysiloxane fluid; and

(e) from 0.1 to 30 parts by weight of the organohydrogenpolysiloxane.

3. A silicone elastomer formed by curing the composition of claim 1.

4. The composition of claim 1, wherein the molar ratio of hydride to vinyl is greater than or equal to 4.

5. The composition of claim 4, wherein the molar ratio of hydride to vinyl is from about 6 to about 11.

6. The composition of claim 1, wherein the alkenyl terminated linear diorganopolysiloxane gum has the formula:

$$M^{vi}D_xD^{vi}_yM^{vi}$$

where M^{vi} is $R^1R^2_2SiO_{3/2}$

D is $R^3_2SiO_{2/2}$;

D^{vi} is $R^4R^5SiO_{2/2}$;

where R^1 and R^4 are each independently $(C_2\text{-}C_6)$alkenyl, R^2, R^3 and R^5 are each independently $(C_1\text{-}C_6)$alkyl or $(C_2\text{-}C_6)$alkenyl, and x and y are chosen so that the viscosity of the gum is in the range of from about 1,000,000 to about 200,000,000 centipoise at 25°C, and having an alkenyl concentration of about 0.001 to about 0.01 mole percent of siloxy units.

7. The composition of claim 6, wherein R^1 and R^4 are vinyl.

8. The composition of claim 6, wherein R^2, R^3 and R^5 are each methyl.

9. The composition of claim 6, wherein y is 0.

10. The composition of claim 6, wherein $y > 0$.

11. The composition of claim 1, wherein the alkenyl containing diorganopolysiloxane gum has the formula:

$MD_wD^{vi}_zM$

where M is $R^6_3SiO_{3/2}$,

D is $R^3_2SiO_{2/2}$;

D^{vi} is $R^4R^5SiO_{2/2}$;

where each R^4 is independently $(C_2\text{-}C_6)$alkenyl, R^3, R^5 and R^6 are each independently $(C_1\text{-}C_6)$alkyl or $(C_2\text{-}C_6)$alkenyl, where w and z are chosen so that viscosity ranges from about 100,000 to about 200,000,000 centipoise at 25° C and having an alkenyl concentration of from about 0.5 to about 15 mole percent of siloxy units.

12. The composition of claim 11, wherein each R^3, R^5 and R^6 is methyl.

13. The composition of claim 12, wherein R^4 is vinyl.

14. The composition of claim 1, wherein the hydroxy terminated polysiloxane fluid has the formula:

$MD_aD^{vi}_bM$

where M is $R^7R^6_2SiO_{3/2}$,

D is $R^3_2SiO_{2/2}$;

D^{vi} is $R^4R^5SiO_{2/2}$;

where each R^4 is independently $(C_2\text{-}C_6)$alkenyl, R^3 and R^5 and R^6 are each independently $(C_1\text{-}C_6)$alkyl or $(C_2\text{-}C_6)$alkenyl, such that the alkenyl content is from 0 to about 2.0 mole percent, R^7 is OH, and a and b are chosen such that the viscosity is from about 25 to about 40 centistokes at 25°C.

15. The composition of claim 14, wherein each R^3 and R^5 and R^6 is methyl.

16. The composition of claim 14, wherein R^4 is vinyl.

17. The composition of claim 1, wherein the organohydrogenpolysiloxane has the formula:

$$M^H D_c D_d{}^H M^H$$

where M^H is $R^8R^6{}_2SiO_{3/2}$,

D^H is $R^9R^6SiO_{2/2}$, each R^6 is independently $(C_1\text{-}C_6)$alkyl or $(C_2\text{-}C_6)$alkenyl, R^8 and R^9 are each H, and c and d are chosen such that the viscosity is from about 10 to about 1000 centipoise at 25°C and the hydride content is from about 0.05 to about 5.0 percent by weight.

18. The composition of claim 17, wherein each R^6 is methyl.

19. The composition of claim 1, wherein the low compression set additive is an acetylene alcohol having the formula:

$$H\text{-}C{\equiv}C\text{-}R^{10}\text{-}OH$$

wherein R^{10} is a divalent hydrocarbon radical comprising from 6 to 40 carbon atoms where the structure of R^{10} may be any combination of linear, branched, aliphatic, aromatic, cycloaliphatic and olefinic, with the limitation that the alcohol is always in the acetylene position.

20. The composition of claim 19, wherein the low compression set is 1-ethynl-1-cyclohexanol.

21. The composition of claim 1, wherein the low compression set additive is 9-ethynyl-9-fluorenol.

22. The composition of claim 1, wherein the low compression set additive is peroxide.

23. The composition of claim 22, wherein the peroxide is methylketone peroxide.